

CLAIMS

1. A composition in form of solution for use in an aerosol inhaler, the composition comprising an active material, a propellant containing a hydrofluoroalkane (HFA), a cosolvent, optionally a low volatility component wherein the propellant consists of a mixture of HFA 227 and HFA 134a in a range from 10:90 to 90:10 and the MMAD of the aerosol particles on actuation of the aerosol inhaler in use is not less than 2 μm with the proviso that the active material is not cyclosporin-A .
2. A composition according to claim 1, wherein the low volatility component has a vapour pressure at 25°C lower than 0.1 kPa.
3. A composition according to claim 1 and 2, wherein the low volatility component has a vapour pressure at 25°C lower than 0.05 kPa.
4. A composition according to any preceding claim, wherein the cosolvent has a vapour pressure at 25°C lower than 3 kPa.
5. A composition according to any preceding claim, wherein the cosolvent has a vapour pressure at 25°C lower than 5 kPa.
6. A composition according to any preceding claim, wherein the cosolvent is an alcohol.
7. A composition according to any preceding claim, wherein the low volatility component includes a glycol, oleic acid or isopropyl myristate.
8. A composition according to any preceding claim, wherein the composition includes not more than 20% by weight of the low volatility component.
9. A composition according to any preceding claim, wherein the composition includes at least 0.2% by weight of the low volatility component.
10. An aerosol inhaler containing a solution composition comprising an

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active material, a propellant containing one or more hydrofluoroalkane, a cosolvent and optionally a low volatility component wherein the particle MMAD is greater than 2 μm and the fine particle dose (< 4.7 μm) is > 30% with the proviso that the active material is not Cyclosporin A.

5 11. An aerosol inhaler according to claim 10 wherein the particle MMAD is greater than 2 μm and the fine particle dose (< 4.7 μm) is > 40%.

12. An aerosol inhaler according to claims 10 and 11 wherein the particle MMAD is greater than 2 μm and the fine particle dose (< 4.7 μm)

10 is > 50%.

13. An aerosol inhaler according to claims 10 to 12 having a chamber volume ranging from 25 to 50 μl yielding an increase of FPD compared to inhalers having chamber volumes larger than 50 μl .

14. An aerosol inhaler according to claims 10 to 13 having part or all 15 of the internal surfaces consisting of stainless steel, anodized aluminium or lined with an inert organic coating.

15. A delivery system for the administration of drugs to the lung consisting of aerosol drug solution in a mixture of 134a and 227 HFA propellants, a cosolvent and optionally a low volatility component, in an aerosol inhaler 20 having a chamber volume ranging from 25 to 50 μm , wherein the MMAD of the aerosol particles on actuation of the inhaler is not less than 2 μm and the fine particle dose (< 4.7 μm) is at least 30%.